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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,321	08/15/2001	Yoshinori Hirobe	CU-2620 RJS	3579

7590 10/20/2003

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EXAMINER

ZIMMERMAN, GLENN

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/930,321	Applicant(s) HIROBE ET AL.	
	Examiner Glenn Zimmerman	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

The indicated allowability of claims 7 and 9 are withdrawn in view of the newly discovered reference(s) to Furusawa et al. U.S. Patent 6,597,092. Rejections based on the newly cited reference(s) follow.

### ***Response to Amendment***

Amendment, filed on 9/11/2003, has been entered and acknowledged by the examiner.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Furusawa et al. U.S. Patent 6,597,092.

Regarding claim 6, Furusawa et al. discloses a shadow mask **(title)** which has a front surface and a rear surface to which through holes are formed in a predetermined arrangement **(abstract)**, each of the through holes having a rear surface side hole portion through which an electron beam enters and a front surface side hole portion through which the electron beam outgoes so as to form a beam spot having a predetermined shape on a surface **(fluorescent screen Fig. 10 ref. 4)** to be irradiated, wherein the front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask has substantially an elliptical shape **(col. 8 lines 27-34)** in which an opening hole width in a direction normal to a virtual line extending from a center of the shadow mask is made smaller **(IS = 160 $\mu$ m; col. 8 lines 38-40)** than that of the front surface side hole portion of the through hole formed at a central portion **(IC = 200 $\mu$ m)** thereof;

Whereof the opening hole width of the front surface side hole portion of the through hole formed at the peripheral portion of the shadow mask has a size not less than 1.46 times a thickness of the shadow mask **(col. 11 lines 8-12)**.

One can see that 0.1mm (shadow mask thickness) \*1.46 = 0.146 mm or 146 $\mu$ m. Now IS =160 $\mu$ m and is not less than 146 $\mu$ m.

Regarding claim 8, Furusawa et al. discloses a shadow mask according to claim 6, wherein the opening hole widths of all the front surface side hole portions including of the front surface side hole portions at the peripheral portion are continuously changed at a predetermined rate of change in accordance with a distance from the central portion of the shadow mask **(col. 9 lines 35-40; claim 4; col. 5 lines 33-35)**.

Regarding claim 9, Furusawa et al. discloses a shadow mask according to claim 6, wherein opening hole widths of all the front surface side hole portions including the front surface side hole portions at the peripheral portion are substantially the same at the front surface side hole portions at the outer most peripheral portion of the shadow mask (col. 8 lines 35-40; **“the aperture shape of each upper hole in the peripheral portion of the shadow mask is such that the longer diameter IL is 200 micrometers and the shorter diameter IS is 160 micrometers”**; periphery means relating to an outer boundary or periphery and that clearly means the entire boundary major axis minor axis and diagonal; col. 5 lines 35-41) and the opening hole widths of the front surface side hole portions of the through holes formed between the through holes formed at the central portion of the shadow mask and the through holes formed to the outermost peripheral portion are continuously changed at a predetermined rate of change (col. 9 lines 35-40; claim 4; col. 5 lines 33-35).

Regarding claim 10, Furusawa et al. discloses a shadow mask according to claim 6, wherein the shadow mask is mounted to a flat-type cathode ray tube (**Fig. 10; col. 11 lines 5-7**).

***Response to Arguments***

Applicant's arguments with respect to claims 7 now 6 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (703) 308-8991. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is n/a.



Glenn Zimmerman

